Clouds and the Earth's Radiant Energy System (CERES)

Data Management System

Configuration Management Plan

Release 2
Version 1

Tammy O. Ayers
Nichele C. McKoy
John L. Robbins

Science Applications International Corporation (SAIC)
One Enterprise Parkway, Suite 250
Hampton, Virginia 23666

Atmospheric Sciences Division
NASA Langley Research Center
Hampton, Virginia 23681-0001

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1.0 Introduction

1.1 Clouds and the Earth's Radiant Energy System (CERES)

The Clouds and the Earth's Radiant Energy System (CERES) program is a key component of the Earth Observing System (EOS). The CERES instrument will provide radiometric measurements of the Earth's atmosphere from three broadband channels: a shortwave channel (0.2 - 5.0μm), a total channel (0.2 - 50μm), and an infrared window channel (8-12μm). The CERES instrument is an improved model of the Earth Radiation Budget Experiment (ERBE) scanner, which was flown aboard the Earth Radiation Budget Satellite (ERBS) from November 1984 until February 1990 in a 57-deg inclination orbit. During much of the same time period, additional ERBE scanner instruments flew on the National Oceanic and Atmospheric Administration (NOAA) Sun-synchronous, polar orbiting satellites NOAA-9 and NOAA-10. To reduce temporal sampling errors, ERBE successfully developed the strategy of flying instruments on Sun-synchronous, polar orbiting satellites with instruments on satellites with lower inclination orbits. Following the same strategy, the first CERES instrument is expected to be launched in 1997 aboard the Tropical Rainfall Measuring Mission (TRMM), a satellite with an orbital inclination of 35 degrees. Additional CERES instruments will be flown aboard the polar orbiting EOS-AM and EOS-PM platforms. The first EOS-AM platform is expected to be launched in 1998, while the first EOS-PM platform is expected to be launched in 2000. As an improvement to the ERBE strategy, CERES will include cloud imager data and other atmospheric parameters in order to increase the certainty of the data and improve the consistency between the cloud parameters and the radiation fields.

1.2 CERES Configuration Management System

The CERES Data Management Team (DMT) is developing a data management system (DMS) to process data from the CERES instruments and produce science data products which will be archived as part of the EOS program. The job of the CERES Configuration Management System (CMS) is to manage CERES computer files containing software, required data for CERES data processing or data management, and associated documentation. The computer files that are under the control of the CERES CMS are referred to as configuration items (CIs) in this document. The management of CERES CIs includes receiving the delivery of CIs from the individual subsystems, testing the CIs as appropriate according to the Test Plan provided by the subsystem, moving CIs to the Langley DAAC's CMS[1], storing CIs, and controlling the configuration of the CERES DMS by overseeing changes and ensuring that they are properly authorized and maintained.

1.3 CERES Configuration Management Organization

The CERES Data Management Team (DMT) is composed of personnel from the Atmospheric Sciences Division's (ASD) Data Management Office (DMO) and contractors who support the

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1. In the case of deliveries of the CERES ERBE-like Subsystems for ERBE scanner data reprocessing, CERES CM moves CIs to the ERBE CMS on the DAAC computer warlock.

CERES project.

The CERES Configuration Management (CM) Team is a small group (typically three or less) of analyst who are members of the CERES DMT. The CM Team oversees and provides procedures for implementing the CERES CM Plan.

The CERES Configuration Control Board (CCB) is comprised of all members of the CERES DMT. The CCB meets on a regular basis to discuss and evaluate proposed changes to and status of CERES CIs. The CCB is lead by the Head of the Data Management Office who is the CCB chairperson. The CCB offers advice to the CCB chairperson, but the CCB chairperson is the decision making authority concerning CERES CIs.

1.4 Configuration Management Definitions

1.4.1 Configuration Control

Configuration control for CERES is the systematic process of maintaining and tracking the life cycle of a CI. It includes the procedures that are established for requesting and submitting a change to a CI, and it provides the mechanism that allows for the retrieval of a CI at any time during its life cycle.

1.4.2 Configuration Identification

The name and version number of a particular CERES CI establishes a specific configuration identification for that CI. It is the configuration identification of a CI that allows the status of a CI to be tracked by the CERES CM System. **Section ??** contains a more detailed explanation as to how a configuration identification of a CERES CI is established and how a particular configuration identification of a CI can be retrieved from the CERES CM System.

1.4.3 Baselines

A baseline is a configuration identification that is associated with a specific time in a CIs life cycle. CERES CM supports two types of baselines, release baselines and intermediate baselines. Release baselines are established for each primary release of the CERES DMS. Release baselines are established after the CERES CM Team verifies that the CIs conform to the CERES CM Acceptance Requirements and notification of acceptance by the Langley Distributed Active Archive Center (DAAC). Intermediate baselines are baselines which are established between release baselines. Intermediate baselines may be established if a significant change is made to the CERES DMS or if enough minor changes have been made to the CERES DMS to constitute a significant change.

1.5 CERES Configuration Management Responsibilities

It is the responsibility of the CERES CM Team to design and implement a CM system that provides the level of configuration management that is appropriate for the CERES project. The CERES CM System provides procedures for accepting, testing, moving, storing, and controlling CERES CIs and their updates. These procedures are described in Sections 2.1 through 2.5 of this document.

The CERES CM Team is responsible for establishing baselines for the CERES CIs and maintaining updates to these baselines (see Section 2.5). The CERES CM Team is also responsible for providing status reports on the CERES CIs. Configuration control and configuration identification is also the responsibility of the CERES CM Team.

1.6 CERES Configuration Management Plan

The CERES CM Plan document discusses the overall plan for the configuration management of the CERES CIs. CERES CM will provide a user-friendly system to assist users in implementing procedures to perform tasks associated with CERES CM. The procedures explained in this document are based on the current experience of the CERES CM Team. As new situations arise or the system is improved, these procedures will be modified accordingly.

The CM Plan is in three parts - an introduction, a description of the CM process, and a description of the CM tools and other information that is available through the CMS Home Page.

In addition, there are several appendices that contain supporting information.

The current plan is for the CERES CMS to be implemented on the Science Computing Facility (SCF) SGI computer named thunder. Since this may change, thunder is referred to as the CM Server in this document.

2.0 CERES Configuration Management Process

The CERES Configuration Management Team manages CIs for each of the following CERES subsystems that fall under the domain of the CERES Configuration Management System.

Subsystem Number	Subsystem Name
1.0	Instrument
2.0	ERBE-like Daily
3.0	ERBE-like Monthly
4.1 - 4.3	Cloud Retrieval
4.4	Convolution
4.5	Inversion
4.6	Estimation of Shortwave and Longwave Surface Radiation
5.0	Instantaneous SARB
6.0	Synoptic Gridding
7.1	Synoptic Interpolation
7.2	Synoptic SARB
8.0	Synoptic Averaging
9.0	SRB/TOA Gridding
10.0	SRB/TOA Averaging
11.0	Grid Geostationary
12.0	SARB MOA Regridding

There are procedures in place to ensure that each CI managed by the CERES CM System is properly introduced into the system, relocated as required to the Langley DAAC and to the appropriate CM storage location, and that updates to the CIs are controlled and records of these updates maintained. More specifically, there are five currently supported CM functions.

1. Accept CI from Subsystem
2. Test CI to ensure compatibility with CM and DAAC requirements
3. Move CI to the DAAC
4. Store CI in CM storage repository
5. Control and maintain records of updates to CI

The CM procedures used to help implement the five CM functions are described below in Sections 2.1 through 2.5.

With each of the three major software releases there are several scheduled CI deliveries to ensure that the required software and supporting files are available at the DAAC to meet project milestones. The current schedule is available over the Web through the CM Home Page. Section 3.2 contains more information on the schedule, its content, and availability.

In addition to these scheduled deliveries, there will, of course, be unscheduled deliveries that must be made to correct or update CIs that have previously been delivered. These unscheduled deliveries are made when circumstances dictate.

The scheduled deliveries are somewhat more systematic. Over a five-week period the following activities take place.

5 weeks before the DAAC delivery date	CM sends an e-mail message to the Subsystem Lead responsible for the upcoming delivery to remind the Lead of the date when the *Preliminary Delivery Memo* is due to CM.
3 weeks before the DAAC delivery date	The *Preliminary Delivery Memo* is sent from the responsible subsystem to CM.
	CM forwards the *Preliminary Delivery Memo* to the DAAC.
	CM sends an e-mail message to the Subsystem Lead responsible for the upcoming delivery to remind the Lead of the date when the *Delivery Package* containing the CI(s) is due to CM.
1 week before the DAAC delivery date	The subsystem delivers the Test Plan to the Documentation and e-mails a copy to CM.
	The subsystem delivers the *Delivery Package* containing the CI(s) to CM.
The week of the DAAC delivery	The finalized *Test Plan* is delivered by Documentation to CM.
	CM delivers the *Delivery Package* and *Test Plan* to the DAAC.

The CM procedures used to help implement the five CM functions are described below.

2.1 Accept CI from Subsystem

2.1.1 Preliminary Delivery Memo Reminder

The scheduled delivery process typically begins about 5 weeks before the CI is scheduled to arrive at the DAAC. CM initiates this process by sending a *Preliminary Delivery Memo Reminder* e-mail message (see example in Appendix B) to the Subsystem Lead who is responsible for the particular CI that is scheduled for delivery to the DAAC. The e-mail reminds the subsystem lead of
- when the *Preliminary Delivery Memo* is due to CM
- where a template for the CERES Delivery Memo and a sample delivery memo can be found
- where to send the *Preliminary Delivery Memo*
- where the pertinent delivery schedule can be found on the Web

2.1.2 Preliminary Delivery Memo

About 3 weeks before the delivery of a CI is due to the DAAC, the responsible subsystem team sends the *Preliminary Delivery Memo* to CM. CM forwards the *Preliminary Delivery Memo* to the DAAC.

2.1.3 Delivery Package Request

Also, during this time period (approximately 3 weeks before the CI is delivered to the DAAC), CM sends a *Delivery Package Request* by e-mail (see example in Appendix C) to the subsystem lead to remind the lead of the date when the delivery package containing the CI scheduled for delivery to the DAAC is due to CM. This e-mail contains the following additional information.
- a reminder that a System Configuration Change Request (SCCR) must be submitted prior to the acceptance of the delivery package (see Section 3.10.1)
- list of the contents of the delivery package
- information on tarring and compressing files and directory preparation
- a description of the "cm_move.csh script" to be used to copy each tar file and its associated listing to the cm_move directory
- where the pertinent delivery schedule can be found on the Web

Appendix D contains the appropriate tar file names for each subsystem for Release 2 deliveries.

2.1.4 System Configuration Control Request (SCCR)

Regarding *System Configuration Control Requests* (SCCRs), these are the steps that must be taken prior to your CI being accepted by CERES CM for delivery to the DAAC. Section 3.10.1 describes the process of accessing, completing, and submitting an SCCR.

1. An SCCR is completed and submitted using the on-line SCCR form (http://asd-www.larc.nasa.gov/~cerescm). The SCCR is electronically submitted to the CERES CM Team.

2. The CERES CM Team presents the SCCR to the CCB for approval. If the SCCR is denied, the CI change process terminates.

3. If the SCCR is approved, the changes requested on the SCCR can be made to the appropriate configuration items by the appropriate software developer/Documentation Group member.

2.1.5 Moving Configuration Items (CIs) into the CERES CMS (cm_move.csh)

The next step is to move CIs into the CERES CM System. An understanding of the CERES CM directory structure will be useful in following the movement of the subsystem CIs once they are entered into the CERES CMS. Figure 2-1 shows the CERES CM directory structure on the CM Server.
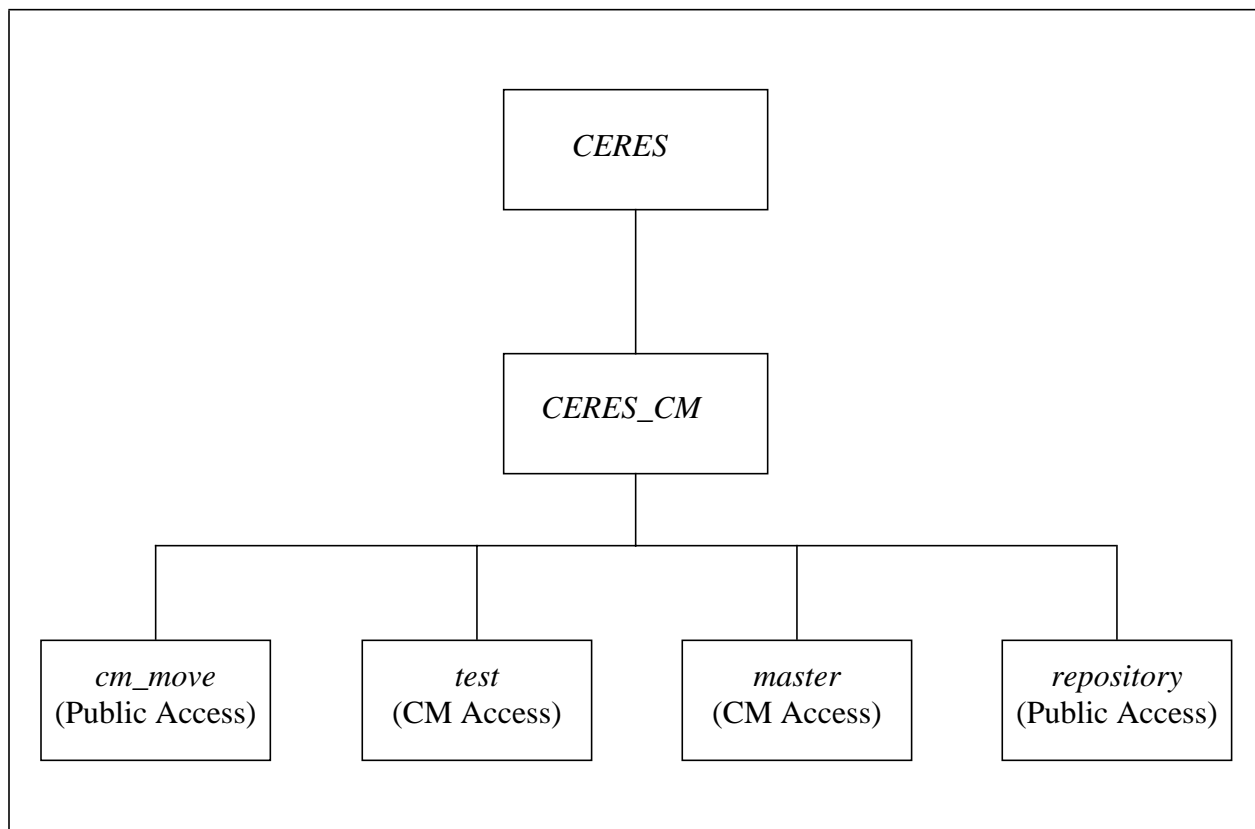

Figure 2-1. CM Directory Structure on the CM Server

For a complete delivery the delivery package includes the following items.

1. Test Plan

The Test Plan is e-mailed to the Documentation Group by the responsible subsystem; a copy is e-mailed to CM. Problems identified by CM during testing are provided back to the subsystem team who passes corrections on to the Documentation Group. The final form Test Plan is e-mailed to CM by the Documentation Group.

2. Delivery Memo

The Delivery Memo is e-mailed to CM by the responsible subsystem team.

3. Tar files that contain all of the source code, scripts, and data files necessary for a CERES subsystem to run

These are the steps to move your CI(s) into the CMS.

1. The CIs are tarred into tar files, and a listing of the files (path, file name, size, and PGE name) that should be contained in the tar file is created using the *tar_file_list.csh* script provided by the CERES CM Team. This script may be obtained from /CERES/ CERES_CM/cm_bin on the CM server. This information is also in the Delivery Package Request e-mail (see Section 2.1.3 and Appendix C).

2. Tar files are created by the subsystem from the working group level. It includes all of the directories from the directory structure established by the Langley DAAC whether or not they contain any files. The tar files are compressed, using the UNIX "compress" command. The appropriate tar file names for each subsystem for Release 2 deliveries are listed in Appendix D.

3. Each tar file and tar file contents listing is moved to the */CERES/CERES_CM/cm_move* directory on the CM Server using the *cm_move.csh* script found in /CERES/ CERES_CM/bin on the CM Server.

4. A System Change Release Request (SCRR) is submitted to the CERES CM Team using the on-line SCRR form (http://asd-www.larc.nasa.gov/~cerescm) to inform them that the tar file is ready to be validated. The SCRR is electronically submitted to the CERES CM Team.

Note that the /CERES/CERES_CM/repository directory is where an analyst would go to retrieve files for future change. The UNIX file permissions of the file(s) need to be changed from read-only to read/write before updating.

2.2 Test CI to ensure conformance to CM requirements

The CERES CM System must ensure conformance of CERES CIs to CERES CM acceptance requirements. Each CI accepted by CM must be tested according to the Test Plan provided by the subsystem, unless expressly instructed not to in writing by the subsystem lead.

The CERES CM Team copies the tar files from the */CERES/CERES_CM/cm_move* directory to the */CERES/CERES_CM/test* directory. In the */CERES/CERES_CM/test* directory, the tar files are uncompressed and un-tarred according to the subsystem's Test Plan. The CERES CM Team then verifies that the delivered CIs meet the CERES CM acceptance requirements.

In order for a delivery package to meet CERES CM acceptance requirements, the following must be satisfied:

- there must not be any non-ANSI compliant source code
- the test(s) documented in the subsystem's Test Plan must run successfully
- the listing of the contents of the tar file must match the actual contents of the tar file
- there must not be any EOSDIS Core System (ECS) prohibited functions in the source code

If the delivery does not meet the CERES CM acceptance requirements, the CERES CM Team notifies the appropriate CERES subsystem team that the delivery is not accepted. The CERES CM Team does nothing further with this delivery package until the appropriate compressed tar file(s) is re-delivered. Furthermore, **the CERES CM Team will not modify any CERES CIs that are delivered to the CM System.**

For more information on ECS prohibited functions, refer to the "Prohibited Functions in the EOSDIS Core System" home page (URL http://ecsinfo.hitc.com/iteams/ProhibFunc). This information is also available through the CERES CM Web site (see Section 3.7).

Reference 2 contains additional information on the contents of a CERES Test Plan.

2.3 Move CI to the DAAC

If the delivery meets the CERES CM acceptance requirements, the delivery package is submitted to the Langley DAAC by the CERES CM Team. This process is accomplished by ftp to the /delivery/CERES/incoming directory on the DAAC computer, samantha.

Note that the final version of the Test Plan as received from the Documentation Group is included in the delivery package two ways - as a PostScript file and tar file containing a view-only FrameMaker book formatted document.

The CERES CM Team notifies the DAAC by e-mail that this transaction has taken place. The final form of the Delivery Memo is provided to the DAAC as an attachment to the e-mail. An example of this e-mail message is contained in Appendix E.

If the delivery verification at the Langley DAAC fails, the delivery process must begin again with the completion and submission of another SCCR. **It is not acceptable for subsystem software developers to submit CERES CIs directly to the Langley DAAC for production processing. All CERES CIs must be submitted to CERES CM and the CERES CM Team provides the CERES CIs to the Langley DAAC.**

2.4 Move CI to CM storage repository

The CERES CM Team is responsible for storing CERES CIs in the CM repository on the CM

Server. The CERES CM System provides procedures for storing and controlling CERES CIs and their updates.

The Concurrent Versions System (CVS), a shareware version control tool, is used to manage the current and previous versions of CERES CIs; however, only the current version of non-ancillary data files are maintained. The non-ancillary data files are stored in the *out_comp*, *out_exp*, and *input* directories as per the Langley DAAC directory structure. See Reference 2 for more information on the Langley DAAC directory structure. After a release baseline is established under CVS, all software and data files associated with that release are copied onto optical disks for permanent storage.

The rest of this section contains procedures that are followed by CM in storing CIs. Recall that an illustration of the CERES CM directory structure is shown in Figure 2-1.

- The CERES CM Team removes the successfully tested copy of the subsystem files (does not include the tar files) from the *CERES/CERES_CM/test* directory. A copy of the subsystem (untarred) is checked out of CVS (*/CERES/CERES_CM/master*) into the */CERES/ CERES_CM/test* directory by the CERES CM Team. The tar files that remain in the */CERES/ CERES_CM/test* directory are un-tarred on top of the files just moved there from */CERES/ CERES_CM/master* via CVS. This is part of the process that enables CVS to recognize and track changes in the CIs.
- The compressed tar files are removed from the */CERES/CERES_CM/cm_move* directory. This directory is now empty of any CIs associated with this delivery.
- The files in the */CERES/CERES_CM/test* directory are checked into the */CERES/CERES_CM/ master* directory using CVS. Once this operation is verified, all files are removed from the *test* directory.
- The CERES CM Team performs a read-only CVS checkout of the files in the */CERES/ CERES_CM/master* directory into the */CERES/CERES_CM/repository* directory. Here, the computer files are available to the "world". The */CERES/CERES_CM/repository* directory is where an analyst would go to retrieve files for future change. The UNIX file permissions of the file(s) need to be changed from read-only to read/write before updating.

2.5 Control and maintain records of updates to CI

Baselines for each primary release of CERES CIs are established after the CERES CM Team verifies that the delivery package conforms to the CERES CM acceptance requirements and upon notification of acceptance of the delivery package by the Langley Distributed Active Archive Center (DAAC).

2.6 Delta Deliveries

The previous sections have discussed complete subsystem deliveries. Delta deliveries are formal deliveries that are performed between complete deliveries and include all subsystem CIs necessary to correct problem(s) found in testing or operational processing, or to make minor functional enhancements. For more information on Delta Deliveries, refer to the Reference 2.

The steps for submitting a delta delivery follow those described in the previous sections, except that only the files containing the CIs modified for the delta delivery are involved.

2.7 Documentation Delivery Process

The CERES CM Team is responsible for storing the CERES documents in the document subdirectory in the CM repository on the CM Server. Copies of document files are available to anyone with an account on the CM Server. **CERES CM only accepts initial and updated versions of documents from the CERES Documentation Group.**

2.7.1 Initial Document Delivery Process

The steps for submitting CERES documents to CERES CM follow.

1. For documentation deliveries, an SCCR is submitted to CM by the appropriate subsystem software developer.

2. After the SCCR has been approved by the CCB, the document is submitted to the CERES Documentation Group.

3. After the CERES Documentation Group formats the document and the author(s) is satisfied with the modified document, the CERES Documentation Group does the following:

   a) Create a compressed tar file, using the UNIX "compress" command, containing the document in full book form, including Table of Contents (TOC), List of Figures (LOF) and List of Tables (LOT) and place it in the */CERES/CERES_CM/cm_move* directory on the CM Server. Because the LOF and LOT are cut and pasted into the TOC file, it is necessary to keep them for regeneration of those files.

   b) Create a compressed tar file, using the UNIX "compress" command, containing the FrameMaker view-only version of the document in book form. The LOF and LOT are removed from the book file since these are already cut and pasted into the TOC. Generate the postscript version of the document from the view-only version. The postscript version is sent to the curator of the WWW CERES On-Line Documentation home page for posting on the WWW.

   c) Send an e-mail message containing information about the document to CERES CM, the CERES Documentation Group, cognizant SAIC and DMO staff members, the author(s) of the document, and the curator of the WWW CERES On-Line Documentation home page to let them know that a document has been delivered to CM. The postscript version of the document and the compressed tar file that contains the FrameMaker view-only version of the document are attachments to this e-mail message.

      Sample e-mail message:

      The following document has been posted on the CM Server in the

/CERES/CERES_CM/cm_move directory.

(full name of document, including subsystem number)
Example: CERES Clouds Retrieval Subsystems (4.1 - 4.3) Release 1 Test Plan

Authors are reminded to replace your resident version of this document with the attached view-only version.

The postscript version of the document is ready to be posted on the WWW.

4. The postscript version, the tar file containing the FrameMaker version, the tar file containing the FrameMaker view-only version, and a listing of the files that should be contained in the tar file that contains the FrameMaker view-only version is copied into the */CERES/CERES_CM/cm_move* directory on the CM Server by the Documentation Group. When CERES CM receives notification from CERES Documentation that a document has been delivered to CM, CM must also have a SCRR to go with the document before this document is accepted. It is the responsibility of the person who delivers the document to the Documentation Group to submit the SCRR to CM.

5. If the document is required by the Langley DAAC, the CERES CM Team delivers the postscript version, the FrameMaker view-only version tar file, and the listing of the files that should be contained in the tar file that contains the FrameMaker view-only version to them.

2.7.2 Updated Document Delivery Process

The steps for updating CERES documents and submitting them to CERES CM follow.

1. When a document needs to be updated, it is retrieved from */CERES/CERES_CM/ repository*/*docs* on the CM Server by the appropriate subsystem software developer. This document is in the form of a compressed tar file that contains the FrameMaker document in full book form. Before the document can be modified, it will be necessary to change the UNIX file permissions from read-only to read/write on the user's computer.

2. An SCCR is submitted to CM by the appropriate subsystem software developer.

3. After the SCCR is approved by the CCB, the updated document is submitted to the CERES Documentation Group.

4. The CERES Documentation Group retrieves the most recent version of the document from */CERES/CERES_CM/repository*/*docs* and compares it with the version from the user using the FrameMaker compare utility to determine where modifications were made.

5. The CERES Documentation Group edits only the changed portions of the document and discusses these proposed edits with the author(s) of the document before actually changing the FrameMaker files.

6. After the CERES Documentation Group makes the agreed upon changes and the CERES Documentation Group and the author(s) are satisfied with the modified document, steps 3a - 5 from Section 3.4.1 are followed.

3.0 CERES Configuration Management System Home Page - Information Resources and Tools

The CERES Configuration Management System Home Page is located at URL
 http://asd-www.larc.nasa.gov/~cerescm/. On this Home Page is a list of links to CM related information and software tools. The following sections describe the information and tools that are available through these links.

3.1 CERES Configuration Management Plan

The most recent version of the CERES Configuration Management Plan can be accessed through this link.

3.2 CERES Configuration Management Schedules

The current and past CERES CM delivery schedules are available here.

The CERES Release 2 Delivery Schedule contains several dates important to the delivery process. The first date listed for each subsystem is the date that the CERES CM Team sends a Preliminary Delivery Memo reminder to the appropriate subsystem lead. An example of this reminder e-mail message is found in Appendix B.

The next date on the delivery schedule for each subsystem is the date that the preliminary delivery memo is given to the CERES CM Team. The CERES CM Team sends a FrameMaker 5.0 view-only version of the preliminary delivery memo to the Langley DAAC representative. The CERES CM Team also sends a delivery package request to the appropriate subsystem on this date. An example of the delivery package request e-mail message is found in Appendix C.

The next date on the delivery schedule is the date that each subsystem must submit its delivery package to CM for verification. The appropriate subsystem personnel also provides the CERES Documentation Group the Test Plan for their subsystem on this date.

The last date on the delivery schedule for each subsystem is the date that the subsystem's delivery package is sent to the Langley DAAC by the CERES CM Team.

Section 2.0 also contains comments regarding schedules and scheduling.

3.3 CERES Release 2 Delivery - Lessons Learned

The Release 2 Delivery Lessons Learned document was developed in an effort to help identify ways to improve and expedite the process of moving CIs through the CERES CMS to the DAAC. It contains a list of problems that were encountered during the Release 2 delivery process and recommended solutions to these problems.

3.4 CERES Delivery Memo Template

A FrameMaker 5.0 editable version of the CERES Release 2 Delivery Memo template is available through this link.

3.5 CERES Delivery Memo Template (SAMPLE)

A sample CERES Release 2 Delivery Memo is available through this link.

3.6 CERES Release 2 Test Plan (SAMPLE)

A sample CERES Release 2 Test Plan is available through this link.

3.7 Prohibited Functions in the EOSDIS Core System

This is a link to the ECS Page, "Prohibited Functions in the EOSDIS Core System." The URL is http//ecsinfo.hitc.com/iteams/ProhibFunc/.

3.8 Toolkit Information

This link provides directory locations of the different versions of the toolkit for various SCFs.

3.9 CERES Test Plan Template (CERES.templateR3.2)

Version 3.2 of the CERES paragraph tag definitions for FrameMaker documents, as created by the CERES Documentation Group, can be downloaded from this location.

3.10 CM System Options and Procedures

3.10.1 CERES Configuration Management System Configuration Change Requests (SCCR) and System Change Release Request (SCRR)

The CERES CM System uses two electronic forms to track CIs and updates to CIs. These are the System Configuration Change Request (SCCR) and the System Change Release Request (SCRR). Applications to access and submit these forms are available on the Web through the CERES CM Home Page (URL: http://asd-www.larc.nasa.gov/~cerescm/). When you get there, click on the SCCR or SCRR icons.

Before you can submit an SCCR or SCRR, you **must add your user information** through the CM Home Page. Once you do this, you don't have to do it again. To do this, click on the "Information" icon. Fill in your name and e-mail address; your first and last names and e-mail address are

required. Then, select either SAIC or NASA and click on "Add User Info." After completing this process, when completing forms over the Web, you must select your name from a drop down menu.

An SCCR is used to describe and justify proposed changes for an existing or new CI. The SCCR contains information such as the description of change, reason for change, SCCR number, date, subsystem id, submitter, and submitter's e-mail address (see Figure 3-1). SCCRs are submitted to the CERES CM Team by the software developers, and the CERES CM Team presents the SCCRs to the Configuration Control Board (CCB). The CCB is established by the Head of the Data Management Office (DMO), who is the CCB chairperson. The CCB meets on a regular basis to discuss and evaluate proposed SCCRs and to advise the DMO Head on their approval or disapproval.

The SCRR is used to notify the CM Team that an analyst has completed a change requested on an SCCR and the modified items are ready to be updated in the CM System. The SCRR contains information such as the items that were changed, the corresponding SCCR number, date, and submitter (see Figure 3-2).

CERES System Configuration Change Request

_____

Subsystem Id: | *Subsystem Name* ▭ | SCCR Date: MM/DD/YYYY   SCCR Number: 0

Description of Change:

Reason for Change:

Estimated Man Power:

Schedule:

Impact:

Approval Date: MM/DD/YYYY   Originator: | *Analyst Name* ▭ |

| Submit SCCR | | Clear SCCR |

Figure 3-1. CERES System Configuration Change Request

CERES System Change Release Request

SCRR Number: 0   SCCR Number: 4
                                    3
                                    2
                                    1

Analyst Name: *Analyst Name*

Tar File Name:

Submit SCRR   View SCCR   Clear Form

Figure 3-2. CERES System Change Release Form (SCRR)

3.10.2 E-mail

If you need to contact the CERES CM Team, you may send e-mail to
"cerescm@cirrus.LaRC.NASA.Gov", or you may click on the e-mail icon at the bottom of the
CM Page just above the words, "Contact: The CERES CM Team".

References

1. Clouds and the Earth's Radiant Energy System (CERES) Data Management System Configuration Management Plan, September 1997, Release 2 Version 1.

2. Science Software Integration and Test (SSI&T) Procedures Document Between the Langley Distributed Active Archive Center (DAAC) and the CERES Instrument Team (IT), April 23, 1997, Version 2.1

Appendix A
Abbreviations and Acronyms

APPENDIX A
Abbreviations and Acronyms

CCB	Configuration Control Board
CERES	Clouds and the Earth's Radiant Energy System
CI	Configuration Item
CM	Configuration Management
CVS	Concurrent Versions System
DAAC	Distributed Active Archive Center
DMO	Data Management Office
DMS	Data Management System
ECS	EOSDIS Core System
EOS	Earth Observing System
ERBE	Earth Radiation Budget Experiment
ERBS	Earth Radiation Budget Satellite
LOF	List of Figures
LOT	List of Tables
NOAA	National Oceanic and Atmospheric Administration
POC	Point of Contact
SCCR	System Configuration Change Request
SCRF	System Change Release Form
TOC	Table of Contents
TRMM	Tropical Rainfall Measuring Mission
WWW	World Wide Web

Appendix B
Preliminary Delivery Memo Reminder

Appendix B
Preliminary Delivery Memo Reminder

Prior to a subsystem's CERES CM delivery date, a Preliminary Delivery Memo reminder is sent to the POC for the appropriate subsystem. An example of the reminder follows.

Preliminary Delivery Memo Reminder:
****

(POC),

This is a reminder that the preliminary delivery memo
for (Subsystem name) is due (Date) to the CERES CM Team.

The template for the CERES Delivery Memo and a sample delivery
memo can be retrieved from the CERES CM Home Page (URL http://
asd-www.larc.nasa.gov/~cerescm). The files, which are in
FrameMaker 5 format, are named del_memo_template.fm5 and
sample_del_memo.fm5.

Please send your delivery memo to the following e-mail address:

    cerescm@cirrus.larc.nasa.gov

NOTE: A copy of the Release 2 Delivery Schedule can be found at the following
    URL:

      http://asd-www.larc.nasa.gov/~cerescm/schedulesl

Thank you,
CERES CM Team

Appendix C
Delivery Package Request

APPENDIX C
Delivery Package Request

Prior to a subsystem's CERES CM delivery date, a Delivery Package Request is sent to the point of contact (POC) for the appropriate subsystem. This e-mail message contains the instructions for preparing and delivering the delivery package. A sample of this e-mail message follows:

Delivery Package Request:
****

(POC),

This is a reminder that the delivery package for (Subsystem) is due (Date)
to the CERES CM Team.

A System Configuration Change Request (SCCR) must be submitted prior to the acceptance of the delivery package. For information on submitting an SCCR, please see John Robbins.

The delivery package contains the following items:

    1. tar file containing software
    2. tar file containing ancillary data files (includes PCF and MCF)
    3. tar file(s) containing all other data
    4. tar file containing documentation (Test Plan and Delivery Memo)
    5. updated CERES Delivery Memo
    6. System Configuration Change Request (SCCR)
    7. a listing per tar file of all delivered files along with
       their size and location.

NOTE: a tar file should NOT exceed 1 GIG.

The tar files should be compressed using a UNIX compress. The tar files should be tarred from the working group directory structure expected by the DAAC. The Science Software Integration and Test (SSI&T) Procedures Document (SPD) contains an illustration of the directory structure at the DAAC (Appendix E).

The listing for each tar file should contain a list of all delivered files
along with their size and location.

Note: After the last test is complete, remove all extraneous files and use
the tar_file_list.csh script located on thunder in the /CERES/CERES_CM/cm_bin
directory to generate a listing of the delivered files. This listing will have
to be separated into the list for each tar file.

USAGE: /CERES/CERES_CM/cm_bin/tar_file_list.csh <PATH OF WORKING GROUP
DIRECTORY>

EX.   /CERES/CERES_CM/cm_bin/tar_file_list.csh /CERES/tisa_grid

Using the /CERES/CERES_CM/cm_bin/cm_move.csh script, which is located
on thunder, copy each tar file and its associated listing to the cm_move
directory as shown in the following example:

USAGE: /CERES/CERES_CM/cm_bin/cm_move.csh <tar_file_name.tar.Z>
<tar_file_name.list>

EX: /CERES/CERES_CM/cm_bin/cm_move.csh tisa_grid_sw.tar.Z tisa_grid_sw.list

If you have any questions, contact the CERES CM Team at the following
e-mail address:

    cerescm@cirrus.larc.nasa.gov

NOTE: A copy of the Release 2 Delivery Schedule can be found at the following
     URL:

      http://asd-www.larc.nasa.gov/~cerescm/schedules

Thank you,
CERES CM Team

Appendix D
Tar File Names

Appendix D
Tar File Names

The following table contains the tar files names used by each CERES subsystem for Release 2 deliveries.

Release 2 Tar File Names

Subsystem	Tar File Names[a]
Instrument	instrument_anc_R2-SCCR.tar.Z instrument_anc_R2-SCCR.list instrument_src_R2-SCCR.tar.Z instrument_src_R2-SCCR.list instrument_data_R2-SCCR.tar.Z instrument_data_R2-SCCR.list instrument_test_plan_R2-SCCR.ps instrument_test_plan_R2-SCCR.tar.Z instrument_test_plan_R2-SCCR.vo.list instrument_test_plan_R2-SCCR.vo.tar.Z
ERBE-like	erbelike_anc_R2-SCCR.tar.Z erbelike_anc_R2-SCCR.list erbelike_src_R2-SCCR.tar.Z erbelike_src_R2-SCCR.list erbelike_data_R2-SCCR.tar.Z erbelike_data_R2-SCCR.list erbelike_test_plan_R2-SCCR.ps erbelike_test_plan_R2-SCCR.tar.Z erbelike_test_plan_R2-SCCR.vo.list erbelike_test_plan_R2-SCCR.vo.tar.Z
Clouds	clouds_anc_R2-SCCR.tar.Z clouds_anc_R2-SCCR.list clouds_src_R2-SCCR.tar.Z clouds_src_R2-SCCR.list clouds_data_R2-SCCR.tar.Z clouds_data_R2-SCCR.list clouds_psf_test_plan_R2-SCCR.ps clouds_psf_test_plan_R2-SCCR.tar.Z clouds_psf_test_plan_R2-SCCR.vo.list clouds_psf_test_plan_R2-SCCR.vo.tar.Z_ret clouds_ret_test_plan_R2-SCCR.ps clouds_ret_test_plan_R2-SCCR.tar.Z clouds_ret_test_plan_R2-SCCR.vo.list clouds_ret_test_plan_R2-SCCR.vo.tar.Z_ret

Release 2 Tar File Names

Subsystem	Tar File Names[a]
Inversion	inversion_anc_R2-SCCR.tar.Z inversion_anc_R2-SCCR.list inversion_src_R2-SCCR.tar.Z inversion_src_R2-SCCR.list inversion_data_R2-SCCR.tar.Z inversion_data_R2-SCCR.list inversion_test_plan_R2-SCCR.ps inversion_test_plan_R2-SCCR.tar.Z inversion_test_plan_R2-SCCR.vo.list inversion_test_plan_R2-SCCR.vo.tar.Z
Instantaneous Sarb	InstSARB_anc_R2-SCCR.tar.Z InstSARB_anc_R2-SCCR.list InstSARB_src_R2-SCCR.tar.Z InstSARB_src_R2-SCCR.list InstSARB_data_R2-SCCR.tar.Z InstSARB_data_R2-SCCR.list InstSARB_test_plan_R2-SCCR.ps InstSARB_test_plan_R2-SCCR.tar.Z InstSARB_test_plan_R2-SCCR.vo.list InstSARB_test_plan_R2-SCCR.vo.tar.Z
TISA Gridding	TISAgrid_anc_R2-SCCR.tar.Z TISAgrid_anc_R2-SCCR.list TISAgrid_src_R2-SCCR.tar.Z TISAgrid_src_R2-SCCR.list TISAgrid_data_R2-SCCR.tar.Z TISAgrid_data_R2-SCCR.list TISAgrid_test_plan_R2-SCCR.ps TISAgrid_test_plan_R2-SCCR.tar.Z TISAgrid_test_plan_R2-SCCR.vo.list TISAgrid_test_plan_R2-SCCR.vo.tar.Z
TISA Averaging	TISAavg_anc_R2-SCCR.tar.Z TISAavg_anc_R2-SCCR.list TISAavg_src_R2-SCCR.tar.Z TISAavg_src_R2-SCCR.list TISAavg_data_R2-SCCR.tar.Z TISAavg_data_R2-SCCR.list TISAavg_test_plan_R2-SCCR.ps TISAavg_test_plan_R2-SCCR.tar.Z TISAavg_test_plan_R2-SCCR.vo.list TISAavg_test_plan_R2-SCCR.vo.tar.Z

Release 2 Tar File Names

Subsystem	Tar File Names[a]
Synoptic Sarb	SynSARB_anc_R2-SCCR.tar.Z SynSARB_anc_R2-SCCR.list SynSARB_src_R2-SCCR.tar.Z SynSARB_src_R2-SCCR.list SynSARB_data_R2-SCCR.tar.Z SynSARB_data_R2-SCCR.list SynSARB_test_plan_R2-SCCR.ps SynSARB_test_plan_R2-SCCR.tar.Z SynSARB_test_plan_R2-SCCR.vo.list SynSARB_test_plan_R2-SCCR.vo.tar.Z
GGEO	ggeo_anc_R2-SCCR.tar.Z ggeo_anc_R2-SCCR.list ggeo_src_R2-SCCR.tar.Z ggeo_src_R2-SCCR.list ggeo_data_R2-SCCR.tar.Z ggeo_data_R2-SCCR.list ggeo_test_plan_R2-SCCR.ps ggeo_test_plan_R2-SCCR.tar.Z ggeo_test_plan_R2-SCCR.vo.list ggeo_test_plan_R2-SCCR.vo.tar.Z
SARB MOA	RegridMOA_anc_R2-SCCR.tar.Z RegridMOA_anc_R2-SCCR.list RegridMOA_src_R2-SCCR.tar.Z RegridMOA_src_R2-SCCR.list RegridMOA_data_R2-SCCR.tar.Z RegridMOA_data_R2-SCCR.list RegridMOA_test_plan_R2-SCCR.ps RegridMOA_test_plan_R2-SCCR.tar.Z RegridMOA_test_plan_R2-SCCR.vo.list RegridMOA_test_plan_R2-SCCR.vo.tar.Z
CERESlib	CERESlib_anc_R2-SCCR.tar.Z CERESlib_anc_R2-SCCR.list CERESlib_src_R2-SCCR.tar.Z CERESlib_src_R2-SCCR.list CERESlib_data_R2-SCCR.tar.Z CERESlib_data_R2-SCCR.list CERESlib_test_plan_R2-SCCR.ps CERESlib_test_plan_R2-SCCR.tar.Z CERESlib_test_plan_R2-SCCR.vo.list CERESlib_test_plan_R2-SCCR.vo.tar.Z

a. SCCR in the file name is the 3 digit SCCR number.

Appendix E
CERES CM Delivery Notification

Appendix E
CERES CM Delivery Notification

Once a delivery has been submitted to the Langley DAAC, a CERES CM Delivery Notification is sent to the Langley DAAC. An example of this e-mail message follows:

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CERES CM Delivery Notification:
================================

Instrument (Subsystem 1.0) is now available on samantha.  A
FrameMaker 5.0 View-Only version of the Instrument Delivery
Memo is attached.  This delivery is in reference to SCCR #33.

The files and their location follow:

   /delivery/CERES/incoming/instrument_anc_R2-033.list
                    instrument_anc_R2-033.tar.Z
                    instrument_data_R2-033.list
                    instrument_data_R2-033.tar.Z
                    instrument_src_R2-033.list
                    instrument_src_R2-033.tar.Z
                    instrument_test_plan_R2-033.ps
                    instrument_test_plan_R2-033.vo.list
                    instrument_test_plan_R2-033.vo.tar.Z

Thanks,
CERES CM
```